2.7 Water Supply and Groundwater Supply

This discussion focuses on the supply of both potable water and groundwater. Other issues related to utilities and service systems, such as wastewater treatment, stormwater drainage, and solid waste are discussed in Section 3.2.11 as effects found not significant during the Initial Study. Water Quality issues associated with groundwater were previously discussed in Subchapter 2.4 Hydrology and Water Quality.

2.7.1 Existing Conditions

Imported Water

Water imported to the San Diego region comes from two primary sources, the Colorado River through the Colorado River Aqueduct, and the State Water Project from Northern California through the Sacramento-San Joaquin River Delta and the California Aqueduct, which is owned and operated by the Department of Water Resources. These sources deliver water to the MWD, which then distributes water supplies on a wholesale basis to water agencies, including the SDCWA. The mission of the SDCWA is to provide a safe and reliable supply of water to its member agencies serving the San Diego region. The SDCWA receives purchased water that is further distributed to member water agencies that serve the County of San Diego.

If the projected MWD, SDCWA, and member agency supplies are developed as planned, no water shortages are anticipated within the SDCWA service area under normal water year, single dry water year, or multiple dry water year conditions through 2030 (SDCWA 2007). However, the planning document in which MWD analyzes regional water supplies, the Urban Water Management Plan (UWMP), is almost five years old, is due for an update, and does not account for issues such as imported water cutbacks (i.e., delta smelt [Hypomesus transpacificus]) or drought conditions. The water shortage condition caused by the current multiple-year drought is discussed in greater detail within Section 2.7.1.2 below.

Groundwater

The imported water delivered by MWD and distributed locally by SDCWA only serves a portion of the total unincorporated population. Geographically, the majority (65 percent) of the unincorporated area (which includes more than half of the project area) is reliant upon either separate groundwater dependent districts or private wells, which are unaffiliated with SDCWA. Groundwater supplies for the areas outside of the SDCWA's service area have never been accurately quantified. Groundwater in the region is limited by the geology and by the semi-arid hydrologic conditions present. Narrow river valleys with shallow alluvial deposits are characteristic of many of the most productive groundwater basins. However, outside of these basins, much of the geology consists of fractured crystalline bedrock and fine-grained sedimentary deposits that are generally capable of producing only small amounts of groundwater to private wells. Water use is discussed further in section 2.7.1.3 below.

2.7.1.1 Existing Regulations

Water Code

Section 10900 et seq. of the Water Code outlines the Agricultural Water Suppliers Efficient Water Management Practices. The intent is to provide assistance and technical consultation to address additional efficiency in agricultural water use. The California Legislature has adopted legislation to address water supply planning efforts. The legislation commonly referred to as SB 610 and SB 221 is now codified in Water Code Sections 10910-10914. The new law places requirements on individual projects and requires consideration of water supplies and demands for a project.

Section 10910, et seq. requires that the water purveyor of a public water system prepare a water supply assessment to be included in the environmental documentation for certain projects subject to CEQA, as specified in Water Code Section 10912. These projects include, among others, those that would demand an amount of water equivalent to, or greater than, that of a commercial project employing more than 1,000 persons or having more than 250,000 square feet of floor space, and a residential project with 500 dwelling units. A water supply assessment would also be required for a project which would increase the number of connections by 10 percent for a public water system that has fewer than 5,000 service connections (Water Code Section 10912(b)). Where large scale projects are proposed, proof of a sufficient supply of water is based on a written verification from the applicable water service provider.

<u>Urban Water Management Planning Act</u>

The state Urban Water Management Planning Act requires water utilities that provide water to more than 3,000 customers or supply more than 3,000 AF per year to prepare and update an UWMP every five years (Water Code Sections 10610 - 10656). These plans are prepared according to guidelines released by the Department of Water Resources. A UWMP is required in order for a water supplier to be eligible for Department of Water Resources administered state grants, loans, and drought assistance. A UWMP provides useful information on water demand, water supply, recycled water, water quality, reliability planning, demand management measures, best management practices and water shortage contingency planning. The UWMP Act requires preparation of a UWMP that:

- 1. Accomplishes water supply planning over a 20-year period in five year increments:
- 2. Identifies and quantifies adequate water supplies, including recycled water, for existing and future demands, in normal, single-dry and multiple-dry years; and
- 3. Implements conservation and efficient use of urban water supplies.

Agencies preparing an UWMP are required to include an urban water contingency analysis. The Department of Water Resources also offers guidance on this analysis (State of California 2009e). Some of the components of the contingency analysis include:

- Stages of action an agency will take in response to water shortages, including achievable levels for voluntary and mandatory rationing during water supply shortages to help control consumption;
- An estimate of supply for three consecutive dry years (quantify the minimum water supply available during the next three years based on the driest three-year historic sequence for your water supply); and
- How it will monitor and document water cutbacks.

The Department of Water Resources' Office of Water Use Efficiency and Transfers also published a guidebook for local agencies to be better prepared for drought conditions. In this guidebook, it was reported that educational efforts and rationing policies established in water shortage contingency plans can affect water use patterns during dry years (State of California 2005b).

San Diego County Groundwater Ordinance

The County of San Diego currently manages anticipated future groundwater demand through County Code Section 67.701 et seq. (Groundwater Ordinance). This Ordinance does not limit the number of wells or the amount of groundwater extraction from existing landowners. However, the Ordinance does identify specific measures to mitigate potential groundwater impacts of projects requiring specified discretionary permits. Existing land uses are not subject to the Groundwater Ordinance unless a listed discretionary permit is required. Additionally, Major Use Permits or Major Use Permit Modifications which involve construction of agricultural and ranch support facilities or those involving new or expanded agricultural land uses are among the exemptions from the Groundwater Ordinance. Also, the Groundwater Ordinance does not apply to byright agricultural uses or operations. However, the agricultural exemptions do not supersede or limit the application of any law or regulation, including CEQA.

General Plan - Conservation Element

The County of San Diego recognizes that the continued growth and development of San Diego County is dependent on the availability of an adequate supply of potable water, and on the region's ability to treat and dispose of wastewater. San Diego County is almost entirely dependent upon imported water. Because of these facts, the General Plan Conservation Element includes a chapter which sets forth policies pertaining to water. Two policies in particular are applicable to the Proposed Project:

POLICY 3: The County shall support programs which assure an adequate supply and quality of water to meet the present and future population needs and to ensure this water is provided in concert with environmental and growth management policies.

POLICY 5: Water distribution systems should be designed and constructed to economically accommodate future use of reclaimed or desalinized water when technologically and economically feasible.

Urban Water Management Planning

In 2005, the MWD adopted its current Regional Urban Water Management Plan. MWD's reliability assessment showed that MWD can maintain reliable water supplies to meet projected demand through 2030. MWD identified buffer supplies, including other State Water Project groundwater storage and transfers that could serve to supply additional water needs. MWD also has an Integrated Resource Plan that outlines a strategy to increase water supplies and lower demands. The plan update, currently being prepared to include projections and planning through 2035, is scheduled to be completed in 2009.

SDCWA adopted its current UWMP in April 2007. SDCWA and its member agencies have made considerable progress in conserving and diversifying its supplies. SDCWA's UWMP documents existing and planned water supplies, including MWD supplies (imported Colorado River water and State Water Project water), SDCWA supplies (water transfer supplies, canal lining project water supplies, and seawater desalination supplies), and local member agency supplies (surface water reservoirs, water recycling, groundwater and groundwater recovery). The SDCWA's UWMP reports that the San Diego region has conserved an average 40,500 AF per year over the last five years. Part of this conservation came as a result of the implementation of several water conservation and transfer agreements, including the SDCWA/Imperial Irrigation District transfer agreement.

Based on SDCWA's water supply reliability assessment as contained in its current UWMP, SDCWA concludes that if the SDCWA and member agency water supplies are developed as planned, along with implementation of MWD's Integrated Resources Plan, supplies will be adequate to serve existing and projected demands within SDCWA's service area under average, single-dry or multiple-dry years through 2030. The SDCWA's UWMP also discloses that SDCWA is at risk for water shortages should supplies identified by MWD not be developed as planned. To alleviate this risk, the SDCWA is pursuing development of additional storage programs, and development of additional seawater desalination. However, the UWMP also states:

A small but growing share of local supply comes from recycled water and groundwater recovery projects, with additional local supply planned from seawater desalination. Yield from these projects are considered drought-proof since they are primarily independent of precipitation (SDCWA 2007).

The 2004 Regional Water Master Plan prepared by SDCWA presents both long-term options and recommendations to meet future water demands as well as the plan for implementing major capital improvements to meet demands through 2030. According to SDCWA, a combination of storage and new supplies would provide a reliable solution to alleviating risks during a dry period.

2.7.1.2 Water Shortage

Drought occurs as a result of lower than average annual rainfall for an extended period of time. Drought is measured by a series of hydrologic indicators, recorded data, and local climactic conditions. The severity of drought ranges from abnormally dry and moderate to severe, extreme, and exceptional. The SDCWA and member agencies classify local conditions as part of a drought response plan: Level 1 - Drought Watch

calls for 10 percent voluntary conservation; Level 2 – Drought Alert requires up to 20 percent mandatory conservation; Level 3 – Drought Critical requires up to 40 percent mandatory conservation; and Level 4 – Drought Emergency requires more than 40 percent mandatory conservation (SDCWA 2009a). San Diego is currently operating at a Level 2, which requires mandatory conservation. As a result of global climate change factors, drought patterns may change or intensify. Extended periods of low precipitation have an effect on local and state water supplies and storage levels.

California is currently experiencing a multi-year drought. According to the State of California Department of Water Resources:

As of February 1, 2009, statewide hydrologic conditions were as follows: precipitation, 65 percent of average to date; runoff, 35 percent of average to date; and reservoir storage, 65 percent of average for the date. Sacramento River unimpaired runoff observed through January 31, 2009 was about 2.1 million AF, which is about 36 percent of average.

Although current weather conditions change and water resources vary from year to year, the period of low rainfall over the past three years has reduced available water supplies and lowered groundwater levels. In 2008, the Department of Water Resources also restricted pumping for the State Water Project in response to a court order protecting the delta smelt, a Federal Threatened and State Endangered listed fish species. In March 2008, the SDCWA issued a model drought ordinance to assist member agencies in implementing voluntary and mandatory use restrictions to respond to progressive stages of a drought in the region. While there are varying levels of certainty regarding water supplies across the state, California is experiencing severe drought conditions in some areas. In mid-2008, the Governor responded to severe water shortages by declaring a state of emergency in several Central Valley counties.

In July 2008, the SDCWA issued this response: "...the region's water supplies remain impacted by extremely dry conditions around California over the last year that significantly reduced storage in key reservoirs, as well as by an eight-year drought in the Colorado River basin" (SDCWA 2008). The SDCWA also reported that pumping restrictions on the State Water Project reduced water delivery by nearly one million AF of water statewide. Pumping restrictions affected approximately 300,000 AF of MWD's supplies. Because San Diego receives water from the State Water Project, local jurisdictions and water agencies are now planning for additional storage capacity while increasing conservation programs and diversifying water supplies including recycled water. Planning for reliability of supplies to meet current and projected demands is conducted, in part, through the preparation and five-year updates of UWMP.

Although water conservation programs are expected to reduce total demand for water in the San Diego region, overall demand for water is expected to grow. Water districts throughout the County of San Diego are also required to prepare an UWMP that indicates how the projected water supply will meet projected demand under normal water years, single dry water year, and multiple water year conditions until 2030. Population and growth projections from the land use jurisdictions are used to determine water demand. Although the individual and regional UWMP conclude that supplies are available to meet the demand, recent water cutbacks at the state level have affected local supplies in the short-term and increased the call for water efficiency and conservation.

Most recently, in April 2009, MWD announced that water deliveries to San Diego will be reduced by 13 percent and rates will be increased in response to the drought conditions. In turn, SDCWA will reduce supplies to member agencies by 13 percent. A news release from SDCWA stated "residents and businesses will face mandatory water use restrictions designed to ensure the region does not exceed its water supply allocation from MWD" (SDCWA 2009b). Subsequently, the SDCWA reported: "Growers and farmers will have agricultural water supplies cut between an estimated 13 percent and 30 percent, depending on the agricultural water program in which they are enrolled" (2009c). As part of the drought response by member agencies, commercial growers not already participating in the Interim Agricultural Water Program (IAWP) could be required to limit irrigation of crops to certain time periods (i.e., before 10:00 A.M. and after 6:00 p.M. only) (SDCWA 2009a).

Urban water management planning continues to address changes in state and local conditions. The UWMPs are scheduled to be updated in 2010 (State of California 2009e). Based on the 2005 Guidelines, the 2010 updates to the UWMPs will likely address recent developments, including consecutive years of reduced precipitation and cutbacks in the regional imported water supply due to the severity of California's drought and recent case rulings that place limits on the distribution of water from the State Water Project. However, the guidelines for the update have not been released.

2.7.1.3 Water Use

The project area includes lands within and outside of the SDCWA service area. Within the service area, retail water service is provided by more than 20 water districts. Of those, the service areas for Rainbow Municipal Water District, Valley Center Municipal Water District, Ramona Municipal Water District, and Padre Dam Municipal Water District cover major portions of the north, central, and southern portions of the project area. Like other water districts in the County of San Diego, these water districts obtain their water supplies from the SDCWA. The remaining portion of the County of San Diego, primarily the eastern portion, is completely dependent on groundwater resources. As discussed in Section 2.4, Hydrology and Water Quality, 55 percent of the project area is groundwater-dependent. A large percentage of the County's agricultural land is involved in the active production of citrus and avocado crops, because they are suited to growing on the steep slopes that are so common in the County of San Diego. Grapes are grown on just over 300 acres throughout the County of San Diego (see Figure 1-5). This is an increase of nearly 50 percent over the last five years. Like citrus and avocado crops, wine grapes can grow on relatively steep slopes and in relatively poor quality soils, but utilize significantly less water to do so. Soil texture and capacity of soil to hold water, slope and soil erosion potential, drainage potential, or high water table are all factors which would affect the water use at individual vineyards.

Various crops produced in the County of San Diego have differing water needs. Crop coefficients are used by growers and scientists to estimate and manage irrigation methods for specific crops. Information about efficient crop watering, timing, and methods has not been calculated to develop a crop coefficient or standard for wine grape crops in the San Diego region. However, the County of San Diego estimates that water use for irrigation could be as high as 2.1-2.9 AF per acre per year (684,300-945,000 gallons). The actual amount of water used varies throughout the year. For example, most irrigation would occur during the growing season (mid-April to October), and it is expected that the vines would not be watered from November through February.

According to the Farm and Home Advisors Office, grape growers use less water than the above numbers indicate. In a comparison between grapes and avocados, avocados (a water-intensive crop) can require up to 3-4 AF per year per acre (977,500-1,303,400 gallons) for optimum production. On the opposite end of the spectrum, grapes (not a water-intensive crop), require about 1.5 AF per year per acre (488,800 gallons) (Bender pers. com. 2009).

Existing winery operators were also consulted about their water use. Irrigation for crops is actually less than one AF per year per acre (50,000 to 300,000 gallons). The range of water use at existing wineries is explained by the variation in elevation, rainfall, and soil conditions. Further, studies have shown that vines growing under water "stress" or deficit conditions can often produce fruit with superior winemaking characteristics. A water-deficit condition causes the production of a chemical which signals the plant to switch from foliage making to survival mode, or fruit growth (Goode 2006). This is an important characteristic in a region with increased scarcity of and competition for water resources.

In addition to crop irrigation, water is used for wine production, cleaning, and visitor services (i.e., restrooms). The peak months of water use in wine processing are the harvest season (August through September). During this time, water use in wine production is estimated at six gallons of water for every gallon of wine produced (County of Napa pers. com. 2009). Local water use for wine production could be as high as 10 gallons of water for each gallon of wine produced (McGeary pers. com 2009).

Approximately 45 percent of the project area lies within the SDCWA boundary and would be able to obtain a water supply from one of the water districts that distributes water from surface reservoirs or other imported water sources subject to existing agreements with providers. For the wineries that lie within the SDCWA boundary, imported water would be available for winery uses including irrigation, domestic, or commercial demands and the winery would not have to rely upon groundwater supplies. Water availability would be subject to agricultural agreements already in place. In many cases, conversion to wine grapes may provide the producer with a viable lower water use crop.

An important factor in any agricultural operation within the County of San Diego is the cost of water due to the reliance on imported water. Limited water supply, conservation incentives, importation costs, and energy costs are reasons for high water costs. To illustrate and compare water costs in the County of San Diego with nearby farming counties, the cost for imported water is \$15 per acre foot in Imperial County and \$379 per AF in Ventura County, compared to \$650 per AF in County of San Diego. In addition, while most farmers in the County of San Diego face high costs of water, others are faced with a limited supply. As discussed in Section 2.7.1.2, Water Shortage, in areas such as Borrego Springs and Julian, farmers rely entirely on groundwater sources to irrigate crops. Water scarcity is a continuous problem for farmers in Borrego Springs given the arid climate of the region and its location outside the boundary of the SDCWA. In particular, groundwater in the Borrego Springs area is subject to an annual decline where recharge does not replace extraction.

The MWD UWMP notes a decline in agricultural water use since 1970 within its service area. Based on crop data, including watering requirements, the SDCWA projects the percentage of water demand for agricultural uses to decrease to 6 percent of the total demand over the next 25 years (SDCWA 2007).

2.7.1.4 Agricultural Programs

Interim Agricultural Water Program (IAWP)

The IAWP is a program of the MWD for agricultural customers to receive discounted water supplies in exchange for cut backs in low water years. Eligible water district customers directly opt into the IAWP which is administered by individual water agencies. The program is voluntary but for those growers who sign up, imported treated and untreated water for local agriculture is provided with certain stipulations. One important component is that farmers receive water at a discounted rate in exchange for mandatory water reduction (up to 30 percent) during periods of shortage, prior to cuts in industrial and municipal supplies.

It was estimated that cutbacks in availability in 2008 would affect approximately 5,000 San Diego County growers who participate in IAWP (SDCWA 2009a). As an example, the Ramona Municipal Water District has over 250 IAWP participants within their service area. In exchange for receiving discounted rates on their water supply, participants were asked to cut their water use in 2008 as mandated by MWD. This action was a result of the State of California's declaration of a water shortage. In October of 2008, the Metropolitan Water District approved a phase out of its IAWP by January 2013 and no new IAWP customers are being accepted.

Special Agricultural Water Rate

The Special Agricultural Water Rate (SAWR) was implemented in 1998 and arose out of the recognition that agricultural water users would be significantly impacted by the costs of the SDCWA's Emergency Storage Project, which was designed to make water available to the San Diego region in the event of an interruption in imported water deliveries. In response, the SAWR was created to provide agricultural customers with a discounted water rate in exchange for a reduced level of service during an emergency shortage. The SAWR discount has two major components: (1) Storage Charge discount, and (2) Melded Supply and Treatment Rate discount.

Under the Storage Charge discount, agricultural customers do not pay the commodity based portion, or Storage Charge, of the Emergency Storage Project but do pay the Infrastructure Access Charge portion. In return, during an emergency shortage, agricultural customers would receive only 50 percent of their normal use while full-price customers would receive 75 percent.

In addition, agricultural customers do not pay the SDCWA's Melded Supply Rate or Melded Treatment Surcharge. As a result, growers (1) do not have to pay for costs associated with the SDCWA's transfer agreements, the All-American - Coachella Canal Lining Projects, and the Central Valley Transfer and Groundwater Storage Assets, which they would not have access to during shortage conditions and (2) pay the Metropolitan IAWP treatment rate.

2.7.2 Analysis of Project Effects and Determination as to Significance

2.7.2.1 Water Supply

Guidelines for the Determination of Significance

For the purposes of this EIR, a significant impact on water supply would occur if:

• Sufficient water supplies are not available to serve the project from existing entitlements and resources, and new or expanded entitlements are needed.

The guideline of significance is derived from Appendix G of the State CEQA Guidelines. The intent of the evaluation of this guideline is intended to determine whether or not the Proposed Project would affect water supplies. Water quality—and groundwater supplies and recharge—wasere previously addressed under Subchapter 2.4, Hydrology and Water Quality.

<u>Analysis</u>

This discussion applies to new or expanded entitlements from future Wholesale Limited and Boutique Wineries which require water services from a water district. Two of the three wineries consulted in the preparation of this EIR rely on groundwater. The third winery is currently using public water and plans to supplement supplies with well water. Future wineries which would rely on groundwater are analyzed under Section 2.7.2.2, Groundwater Supply. Some future wineries could require or already have water service from a water district, while others may need to make a new connection or change their status to accommodate the retail and wine tasting component. The majority of the winery operators who responded to a survey produce less than 1,500 cases per year and are located on less than 25 acres (Appendix B). Under the proposed ordinance, a winery operating by right as a Wholesale Limited or Boutique Winery would be limited to a maximum floor area of 5,000 square feet for non-residential structure(s) to house equipment used in winemaking. Large scale projects such as those with more than 250,000 square feet of floor space or 500 residential units would be subject to the water supply assessment requirements contained in Sections 10910-10914 of the Water Code to determine whether sufficient water supply is available to meet expected project demand. However, Wholesale Limited and Boutique Wineries would not be of a size and scale that would be affected by these water supply assessment requirements.

The Proposed Project could involve the expansion of agriculture on agriculturally-zoned lands. One of the project objectives is to encourage the farming of crops that use less water. Although vineyards generally require less water than many other crops grown within the County of San Diego, irrigation requirements for future wineries are not yet known. Currently, the average water use for vineyards is expected to be less than water intensive crops. Wineries could use up to 1.5 AF of water per year per acre.

Based on the estimate that 6-10 gallons of water used for every gallon of wine produced, a Boutique Winery producing 12,000 gallons of wine per year could use an additional 72,000-120,000 gallons of water per year for wine production. The main water use within a winery itself is for washing down floors and areas throughout the winery, cleaning equipment including the receiving lines, the presses, the tanks, and the bottling lines,

and to wash the barrels or other storage containers at various stages of the winemaking process.

Water can be used as a frost preventative by growers near rivers or in a valley. Existing winery operators indicated that they are not using water as a frost preventative either because it is not necessary or it is not effective in higher elevations and sloped areas. For Boutique Wineries which would operate by right, additional water supplies would be needed for non-production uses at the winery, like toilets and sinks, to accommodate the tasting room component.

Although irrigation and water demand requirements for vineyards and wine production would be comparable to or less than for other crops grown in the region, it is not known whether grape crops would replace water intensive crops or non-irrigated land. The water usage from irrigation, wine production, and other uses at individual wineries varies among existing wineries in operation depending on site conditions and irrigation techniques.

SDCWA is the supplier of water for the San Diego region and the individual water agencies that have a portion of their service area within the project area. SDCWA, like other water districts, relies on the population projections and analysis conducted by local and regional land use agencies to develop information for water demand. In their 2005 UWMP, SDCWA estimated that between 2005 and 2030, the percentage of water used for agriculture is going to decrease, while the percentage for water use for commercial and industrial and residential is projected to increase (SDCWA 2007). The 2010 update to the UWMP would also need to identify a contingency analysis based on current conditions, including changes to supply estimates based on the driest three-year historic sequence, projected water use based on land use characteristics, etc. Because the Proposed Project is an extension of agricultural uses in A70 and A72 Zones, replacement of existing crops and expansion of winery operations to allow retail sales and wine tasting would not change the growth projections or demand for resources on which water supply and availability are measured in the UWMP for the SDCWA.

Information about the planned response to prolonged drought conditions indicates that before 2009 is over, commercial growers could be required to limit irrigation of crops to certain time periods or observe other mandatory conservation measures. However, the effect on individual water agencies has not been determined. In response to the NOP, Ramona Municipal Water District indicated that drought conditions could lead individual water agencies to place a moratorium on new or expanded service (Appendix C). For development of new wineries or expansion of existing wineries on lands not currently irrigated, there is a potential to significantly increase demand for water at a time when rainfall levels are below average and statewide drought conditions have resulted in cutbacks of imported water. There is a lack of certainty of water supplies available to serve the project area from individual water agencies. Where vineyards are planted as replacement for a higher water use crop (e.g., avocado, citrus, etc), new or expanded wineries could result in a decrease in water use. However, the location and number of new or expanded water service connections that could be required from Wholesale Limited or Boutique Wineries operating by right under the amended Zoning Ordinance are not known and could result in a demand for water where currently none exists. Therefore, with respect to imported water supplies, the Proposed Project could result in significant impacts (WS-1).

2.7.2.2 Groundwater Supply

Guidelines for the Determination of Significance

A significant impact would occur if the Proposed Project would:

 Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

This guideline listed above is from Appendix G of the State CEQA Guidelines and is intended to protect groundwater supplies.

Analysis

As stated in Section 2.4.1.3 above, approximately 45 percent of the project area lies within the SDCWA boundary and would be able to obtain a water supply from one of the water districts that distributes water from surface reservoirs or other imported water sources subject to existing agreements with providers. For the wineries that lie within the SDCWA boundary, imported water would be available for winery uses including irrigation, domestic, or commercial demands, and the winery would not have to rely upon groundwater supplies. Some of this 45 percent may lie within the boundaries of a water district but have an on-site well and use a combination of imported water and groundwater. For these areas within the SDCWA boundary, water availability would be subject to agricultural agreements already in place. In many cases, conversion to wine grapes may provide the producer with a viable lower water use crop.

Conversely, approximately 55 percent of the project area lies outside of the SDCWA boundary and would rely on groundwater for irrigation and wine-making purposes. Because one of the objectives of the proposed ordinance amendment is to encourage the growth of the wine industry in the County and because a large portion of the project area is groundwater dependent, an increase in the number of wineries and vineyards in groundwater dependent areas may impact groundwater supplies. In some cases, the impacts would not be significant because the increase in water use would not substantially deplete groundwater supplies. As noted in a report entitled Best Winery Guidebook: Benchmarking and Energy and Water Savings Tool for the Wine Industry, prepared by the Lawrence Berkeley National Laboratory for the California Energy Commission Public Interest Energy Research Program, the main water use within a winery itself is for cleaning. This was confirmed by local winemakers who were interviewed for this EIR and by winemakers in San Diego and Riverside Counties who responded to a County survey conducted in the fall of 2008 (Appendix B). The major water use areas are the crush pad and press area, the fermentation tanks, barrel washing, barrel soaking, the bottling line, and the cellars and barrel storage areas. Water is used to wash down floors and areas throughout the winery, to clean equipment including the receiving lines, the presses, the tanks, and the bottling lines, and to wash the barrels or other storage containers at various stages of the winemaking process.

Water is also used for humidification in the cellars and barrel storage areas, and other non-production uses at the winery, like toilets and sinks in office buildings and maintenance workshops. The majority of water use in the winery itself occurs during the initial crushing, fermenting, and bottling of wine. These activities occur over a limited

period of time when grapes are harvested, typically September and October. Water use in the winery would be reduced throughout the remainder of the year. Production of wine grapes requires significantly less water than many other crops grown within the County. Based on the interviews with three representative producers in the County, estimated water use for irrigation ranged between 50,000 and 300,000 gallons per acre annually. As previously noted, a number of factors can influence irrigation requirements, including elevation, rainfall, and soil conditions. On the opposite end of the water use range are avocados, which can require up to three to four AF per acre (970,000-1,303,400 gallons per acre).

Therefore, the water use required to operate these newly allowed uses would be limited in duration and would not be substantial compared to the amount used by other crops, especially avocado and citrus, because irrigation requirements are significantly less per acre. Further, it is likely that the replacement of existing crops and expansion of winery operations to allow retail sales and wine tasting would not substantially increase demand for groundwater or deplete groundwater supplies to a level which would not support existing land uses or planned uses for which permits have been granted. However, as with imported water supplies, the number and location of new or expanded wineries which may be relying on groundwater for their primary water source is unknown. Therefore, the Proposed Project may result in additional demand for groundwater where none currently exists, or where groundwater supplies are limited and/or yields of groundwater are low. Consequently, with respect to groundwater supplies, impacts would be **significant (WS-2)**.

Because the proposed ordinance includes language limiting the square footage of winery production and tasting room structures, the amount of increased impervious surface areas would be minimal. Thus, new wineries would not involve operations that would interfere substantially with groundwater recharge. Furthermore, the replacement of an existing crop in order to grow wine grapes or construction of tasting rooms as allowed for Wholesale Limited or Boutique Wineries would not involve regional diversion of water to another groundwater basin, or diversion or channelization of a stream course or waterway with impervious layers, such as concrete lining or culverts, for substantial distances (e.g., ¼ mile). Therefore, **no impact** to groundwater recharge is anticipated.

2.7.3 Cumulative Impact Analysis

<u>Imported</u> Water Supply and Groundwater Supply Guideline for Determination of Significance

 Cumulative <u>imported</u> water supply impacts would be significant if the Proposed Project's water supply demands significantly exceed those planned for in the MWD UWMP.

Basis for the Assessment

In 2005, the MWD adopted its current Regional Urban Water Management Plan. MWD's reliability assessment showed that MWD can maintain reliable water supplies to meet projected demand through 2030. MWD identified buffer supplies, including other State Water Project groundwater storage and transfers that could serve to supply additional water needs. MWD also has an Integrated Resource Plan that outlines a strategy to increase water supplies and lower demands. The plan update, currently being prepared

to include projections and planning through 2035, is scheduled to be completed in 2009. MWD supplies water to wholesalers including the SDCWA.

Water supplies for the County of San Diego within the SDCWA boundaries are provided mainly by SDCWA to it's member agencies of the SDCWA or through groundwater wells outside of the SDCWA service area. In order to project and plan for future water needs, SDCWA has entered into a Memorandum of Agreement with SANDAG to use the most recent regional growth forecast for planning purposes developing the UWMP and Regional Water Facilities Master Plan (RWFMP). Because the information in the UWMP is based on regional growth forecasts by SANDAG, the basis of those forecasts is critical to supply and demand projections. SANDAG projects growth based in part on local general plans. To the extent that development occurs in accordance with the general plans used to prepare the growth forecasts, their long-term impact on future water supply and demand for the underlying land use designations in the general plans are wereincluded-addressed byin the SDCWA's UWMP and RWFMPplans.

Analysis

The Proposed Project does not amend the General Plan or alter the growth projections used by SDCWA and therfore, conforms to the assumptions used in the UWMP and RWFMP. Replacement of existing crops and expansion of winery operations to allow retail sales and wine tasting would not change the underlying land use designations upon which water supply and availability are planned for in the UWMP. Although irrigation and water demand requirements for vineyards and wine production would be comparable to, or less than for other crops that can be grown on A70 and A72 lands, there is a potential to significantly increase demand for water on lands not currently irrigated, at a time when rainfall levels are below average and statewide drought conditions have resulted in cutbacks of imported water (similar to the discussion regarding WS-1 above). There is a lack of certainty of water supplies available to serve the project area from individual water agencies. Where vineyards are planted as replacement for a higher water use crop (e.g., avocado, citrus, etc), new or expanded wineries could result in a decrease in water use. However, the location and number of new or expanded water service connections that could be required from Wholesale Limited or Boutique Wineries operating by right under the amended Zoning Ordinance are not known and could result in a demand for water where currently none exists. Therefore, with respect to imported water supplies, the Proposed Project could result in a significant cumulative impact (WS-3).

The SDCWA estimates that agricultural customers account for 10 to 20 percent of the water demand in the region, and that demand varies based on weather and rainfall. In 2005, agricultural customers accounted for 13 percent of the water demand (SDCWA 2007). According to the UWMP, if supplies are developed as planned, no water shortages are anticipated within the SDCWA service area through 2030; however, the UWMP is due for an update (SDCWA 2007).

The Proposed Project does not amend the General Plan and, as a result, conforms to the growth projections from SANDAG. These projections were used by SDCWA in developing the means by which cumulative water demand requirements are met. The adoption of the ordinance, therefore, conforms to the plan, and cumulative impacts to water supply are less than significant.

Groundwater Supply Guideline for Determination of Significance

A significant cumulative impact would occur if the Proposed Project would:

• <u>Substantially contribute to the depletion of groundwater supplies or interfere</u> substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

This guideline is from Appendix G of the State CEQA Guidelines and is intended to protect groundwater supplies.

Basis for the Assessment

As stated above in Section 2.7.2.2, approximately 45% of the project area lies within the SDCWA area and would have access to imported water, and 55% of the project area lies outside the SDCWA area and is dependent on naturally occurring groundwater resources. Within the SDCWA, groundwater may also be used but can more easily be supplemented with imported water as needed. Conversely, imported water may be supplemented with groundwater when agricultural concerns are subject to restrictions on the use of imported water and groundwater is available.

Groundwater availability is subject to many factors within San Diego County such as physical geological properties and amount of groundwater recharge and storage. Fractured rock aquifers are the prevailing aquifer type in the County of San Diego. This type of aquifer has low groundwater storage capacity and groundwater levels can fluctuate widely due to differences in annual precipitation and groundwater use. There are also extensive areas of alluvial aquifers (such as the Ramona area) which have large groundwater storage capacity and groundwater levels are not subject to drastic variations. However, where groundwater demand exceeds the rate of recharge, historical groundwater levels demonstate a trend of decline.

Analysis

As stated above in Chapter 2.7.2.2., one of the objectives of the proposed ordinance amendment is to encourage the growth of the wine industry in the County which could result in new and/or expanded vineyards and new tasting rooms. This would cause a corresponding increase in the demand for groundwater for irrigation, wine production, and customer needs associated with a tasting room.

The severity of any impacts associated with increased groundwater use as a result of the project in conjunction with other existing and planned uses will be dependent upon several factors including but not limited to the following:

- Physical properties of the underlying aquifer;
- Whether irrigation demands are increased for new or expanded vineyards and wine production, or reduced by converting from a higher water demanding crop; and,
- Cumulative demands on the aquifer from nearby agricultural or other types of land uses.

Locations of groundwater supply issues (such as declines in the groundwater table, poor grondwater recovery, low well yield, poor groundwater quality, etc.) are described in the General Plan Update Groundwater Study (Revised December 1, 2009). However, localized groundwater supply problems are not limited to these areas and are possible throughout the County where there is excessive groundwater use by a single user, or due to the unique physical geologic properties affecting the groundwater storage for a particular site. Since the number and location of new or expanded wineries which will rely on groundwater for their primary water source is unknown, the Proposed Project may cause or contribute to depletion of groundwater supplies where supplies are limited and/or yields of groundwater are low. Consequently, with respect to groundwater supplies, cumulative impacts would be significant (WS-4). Because the proposed ordinance includes language limiting the square footage of winery production and tasting room structures, the amount of increased impervious surface areas would be minimal. Thus, new wineries individually and in combination with other types of land uses in the groundwater dependent portion of the county would not interfere substantially with groundwater recharge. Therefore, no impact to groundwater recharge is anticipated.

2.7.4 Significance of Impacts Prior to Mitigation

2.7.4.1 Water Supply

WS-1 and WS-3: Direct and cumulative ilmpacts from a lack of water available from existing entitlements and resources to serve new wineries or expansion of existing wineries on lands not currently irrigated would be significant.

2.7.4.2 Groundwater Supply

WS-2 and WS-4: Because of the potential for the development of future new or expanded wineries to create additional demand for groundwater, <u>direct and cumulative</u> impacts related to the adoption of the Proposed Project would be significant.

2.7.5 Mitigation

The Proposed Project is a zoning ordinance amendment and is not project specific. The proposed zoning ordinance amendment would allow specified winery projects by right within A70 and A72 Zones, including the opening and operation of Boutique Wineries and the operational expansion of Wholesale Limited Wineries. The impacts of specific future winery projects cannot be determined at this stage, nor can appropriate specific mitigation measures be identified or enforced.

Some of these unidentified future winery projects may be required to obtain a discretionary permit, such as a Grading Permit, which would trigger CEQA review of the specific proposed winery project. For such winery projects, feasible mitigation measures could be included in the permit, thus making them enforceable. Typical mitigation measures for future winery projects having impacts on water supply could include:

 Voluntary participation by the project applicant in the IAWP to reduce water use by 30 percent (or more) in exchange for a discounted water rate;

- Agreement by the project applicant to the SWAR conditions to receive only 50 percent (or less) of normal water use during emergency water shortages in exchange for a discounted water rate;
- Prohibition of the conversion of any dryland agricultural or non-irrigated lands to grape production;
- Project design that incorporates advanced water conservation measures to the
 maximum extent feasible, including but not limited to grape crop selection for
 restricted irrigation, highly-efficient irrigation technologies to prevent evaporative
 loss, irrigation and civil water systems that maximize on-site recirculation or recharge
 for non-potable uses, limited use of toxic compounds (fertilizers and pesticides)
 combined with runoff catchment and filtration systems to maximize groundwater
 recharge, and other highly water efficient landscape modification and visitor structure
 design.

Thus, for by-right future winery project subject to CEQA review, specific impacts to water supply resources would be analyzed and mitigated when feasible.

However, there may also be future by-right winery projects for which related discretionary permits are required but for which mitigation would not be feasible, or future by-right winery projects for which no related discretionary permit is required at all (e.g., where grading volume is less than 200 CY). For such by-right winery projects, CEQA review would not be required, and appropriate mitigation would not be possible.

As it cannot be concluded at this stage that impacts to water supply from all future winery projects allowed by the ordinance amendment would be avoided or mitigated, impacts would remain significant and unmitigated.

2.7.6 Conclusion

The proposed ordinance amendment could result in the addition of new wineries, expansion of existing wineries, and additional tasting rooms at existing wineries. The expansion and opening of new Boutique and Wholesale Limited Wineries could occur by right without the need for a discretionary permit. Although the Proposed Project would involve agricultural uses on agricultural lands and grape crops are expected to require less irrigation than water intensive crops, impacts could result from new or expanded wineries on lands not currently irrigated or where groundwater supplies are limited and/or yields of groundwater are low (WS-1 and through WS-24).

Some future winery projects, in accordance with the Proposed Project zoning ordinance amendment, may be required to obtain a discretionary permit which would trigger CEQA review of the specific Proposed Project, and mitigation measures could be included in the permit, thus making them enforceable. However, there may also be future by-right winery projects for which no related discretionary permit would be required, or future winery projects for which mitigation measures are infeasible. Thus, without a mechanism to demonstrate that all impacts have been reduced to below a level of significance, impacts remain **significant and unmitigated.**

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